

CLAIMS:

1. A test module for testing the susceptibility of an integrated circuit design to latch-up, the test module comprising a plurality of test blocks (30), connected in parallel, each test block comprising an injector block (12) for applying a stress current or voltage to the respective test block (30), and a plurality of sensor blocks (13) located at successively increasing distances from the respective injector block (12), each sensor block (13) comprising a PNPN latch-up test structure.
2. A test module according to claim 1, wherein each test block (30) is connected to a bondpad (11), said stress current or voltage being applied to said injector (12) via said bondpad (11).
3. A test module according to claim 1 or claim 2, wherein said injector blocks (12) are connected between first and second supply lines (14,15).
4. A test module according to any one of claims 1 to 3, wherein contacts (5,6) of said sensor blocks (13) are connected between third and fourth supply lines (18,19), different from said first and second supply lines (14,15).
5. A test module according to any one of the preceding claims wherein each PNPN latch-up structure comprises an N^+ and a P^+ hot-active (7,8), which hot-actives (7,8) are connected to respective probe sensor lines (16,17).
6. A test module according to any one of the preceding claims, wherein heating means (20) is provided in respect of said PNPN latch-up test structures.
7. A test module according to claim 6, wherein said heating means comprise polysilicon rings (20) located around respective PNPN latch-up test structures.

8. A method of testing the susceptibility of an integrated circuit design to latch-up, the method comprising providing a test module comprising a plurality of test blocks (30), connected in parallel, each test block (30) comprising an injector block (12) for applying a stress current or voltage to the respective test block (30), and a plurality of sensor blocks (13) located at successively increasing distances from the respective injector block (12), each sensor block (30) comprising a PNPN latch-up test structure, the method further comprising applying a stress current or voltage to one or more of the injector blocks (12), and obtaining resultant current measurements at one or more of the respective sensor blocks (13).
9. A method according to claim 8, further comprising disconnecting said sensor blocks (13) during application of said stress current or voltage to one or more of said injector blocks (12), and obtaining current measurements at said injector blocks (12) to determine the susceptibility thereof to latch-up.
10. A method according to claim 8 or claim 9, wherein an injector block (12) or a sensor block (13) is determined to be susceptible to latch-up if a current measurement thereat exceeds a predetermined threshold.
11. A method according to any one of claims 8 to 10, wherein sequential current measurements are obtained at each PNPN latch-up test structure of a sensor block (13).
12. A method according to any one of claims 8 to 11, wherein each injector block (12) and each sensor block (13) can be independently biased.
13. A method according to claim 12, wherein each PNPN latch-up test structure can be biased independently.